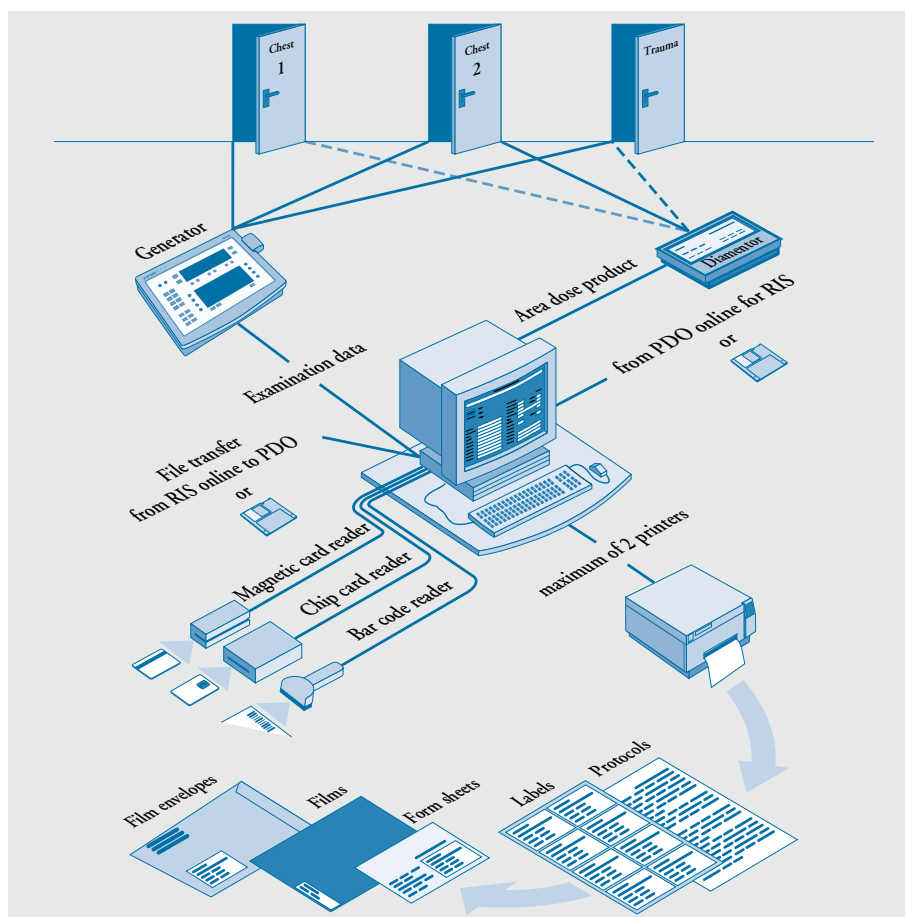




INSTRUCTIONS FOR USE

OPTIMUS-PDO V. 2.3

Patient Data Organizer

English



PHILIPS

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Please observe the safety instructions in the Operator's Manual for the generator.

Conformity



This Medical Device meets the provisions of the Medical Device Directive 93/42 EEC (93)

If you have further questions regarding the applicable national or international standards, please address them to:

Philips Medical Systems DMC GmbH
Quality Assurance Department
Roentgenstrasse 24
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Copyright

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Roentgenstrasse 24, 22335 Hamburg

This manual is a translation from German.

With the transfer of the data carrier into the possession of the user, the user acquires a non-exclusive, non-transferable right to use the software stored on the said data carrier.

Modifications to software, multiple use of software and the making of copies for purposes other than data backup must be approved by Philips in writing beforehand. Please mark any backup copy with a reference to the Philips copyright.

Scope of supply

With the PDO you receive

- this Operator's Manual
- a floppy disk
- a cable* for serial data transmission and
- an additional protective earth lead*.

* Both cables are 10 m long and must be connected up to the generator control desk and the PC.

How the program operates

The PDO receives **examination data**

- from the generator and/or
- from a DIAMENTOR

and **patient data**

- from the RIS (Radiology Information System)
- from a chip card
- via a bar code reader or
- as input via the keyboard.

It assigns the examination data to the corresponding patient data and makes them available for passing on to

- RIS and/or
- up to 2 printers.

A PDO can administer up to 3 examination rooms.

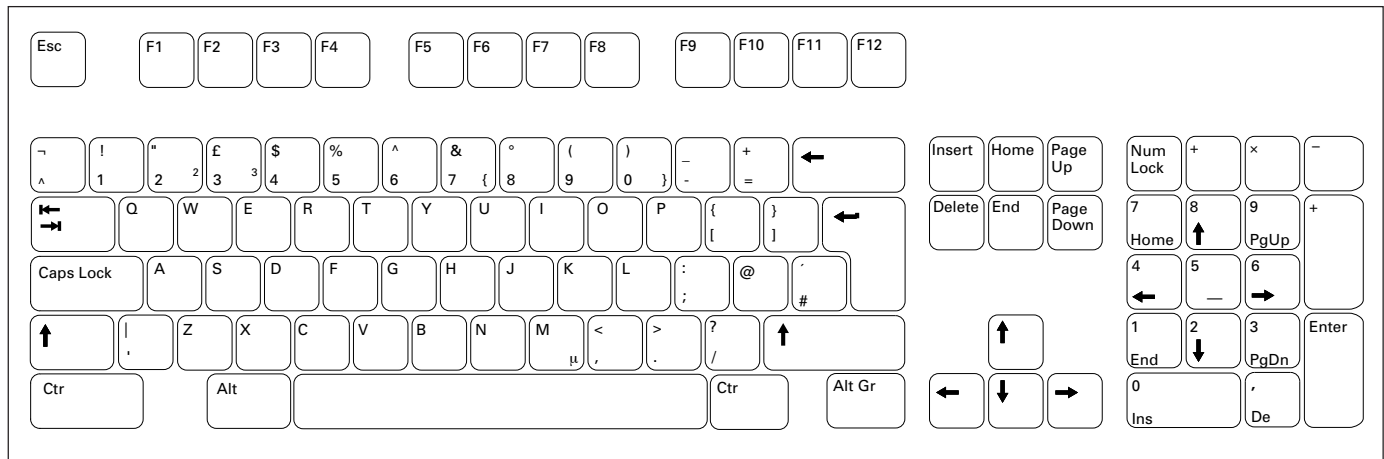
You can configure the program according to your requirements. For further information on this please refer to the Appendix.

How to install the program

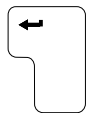
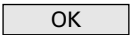
- Connect the unit up as described below.
 - Make a backup copy of the floppy disk provided.
 - Terminate all applications under Windows.
 - Insert the floppy disk in the appropriate disk drive.
 - From the Windows program manager or from the file manager select „File“.
 - Select „Run“.
 - Enter „a:\setup“ or
 - replace „a:“ by the appropriate disk drive letter
- or
- open the window for the floppy disk drive in the file manager.
 - Double-click „setup.exe“.
 - Follow the instructions on the screen.
 - After installation you will have to adapt the program to your system and test it (see Appendix).

Legend

Keyboard (example)

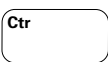


The following keys are important for operating the program:

-  Activate next entry field
- Hold down  and press . Activate previous entry field
-  Activate/deactivate pull-down menus
-  corresponds to softkey 
-  Abort selection or close window
- 

- Move cursor in the entry fields
 - Switch between examination rooms in the „Room“ window
 - Select exposure number in the „Exposure“ field
 - Select an entry from a list
 - Select within the pull-down menus
- Space bar** In the „OUTPUT“ area switch the check box for printer/file ON/OFF

The following program-specific commands are stored on the function keys:

-  Display function key assignment
-  Equivalent to the function 
-  Equivalent to the function 
-  Equivalent to the function  :
Change patient and enter new patient data via the default input unit
-  Switch display to Room 1
-  Switch display to Room 2
-  Switch display to Room 3
-  Not assigned
-  Change patient and enter new patient via the input file
-  Change patient and transfer new patient data from a chip card
-  Change patient and enter new patient data via keyboard or read in from bar code reader
-  Simulate exposure in the „Test“ mode
-   Activate "series"

Legend

The data mask (example)

OPTIMUS - PDO

File Configuration Info

PATIENT

NEW VIEW EDIT

Room

☒ Room 1
☐ Room 2
☐ Room 3

Name
First name
Date of birth
Sex
Patient ID
RIS ID
Examination
Ref. doctor
Diagnosis
Remark

EXAMINATION

Series Exposure(s)
APR Name
APR No. Film Format
Auxiliary SID
kV mAs
Fluoro time Area Dose

OUTPUT

☐ Printer 1
☐ Printer 2
☐ File

PHILIPS

OPTIMUS NUM

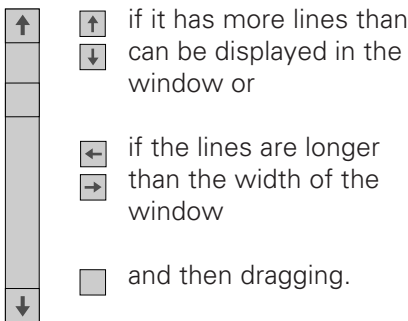
The mask is structured as follows:

- Top edge:
This is where the **pull-down menus** appear.
- Bottom edge:
This where the **status line** appears.
- „PATIENT“ panel:
Here you will find the patient data and the examination room.
- „EXAMINATION“ panel:
Here you will find the exposure data.
- „OUTPUT“ panel:
Here you can select the output unit.
(„place a cross“ in the appropriate box)

The screen windows have some identical panels.

On the screen you can perform the following by clicking with the mouse

-  Open system menu
-  Reduce window to symbol
-  Enlarge symbol to full size
-  Switch window over to previous size
- Scroll a list with



As an alternative to the mouse you can use the keyboard to open certain windows. For this you must press  and enter the letter underlined.

In the **pull-down menus** you will find headings under which there are other menus.

The **status line** shows messages from the generator and from the DIAMENTOR where applicable.

You can call up functions which are stored under **softkeys** (e.g.  ,  in the data mask) by clicking onto the softkey with the mouse.

What do the entry fields and softkeys mean?

Pull-down menus

- | | |
|---------------|--|
| File | Here you will find the „File“ sub-menu. |
| Configuration | Here you will find the „Configuration“ sub-menu. |
| Info | In this sub-menu <ul style="list-style-type: none"> – you can find out what the function keys are for – you can obtain further information |

„PATIENT“ panel

- | | |
|---|--|
|  | <ul style="list-style-type: none"> – Change patient and enter new patient data via the default input unit. – Reset generator, and DIAMENTOR where applicable (RESET). – Store and print patient data and exposure parameters. – Delete patient data and exposure parameters for the examination room selected. |
|---|--|

	Without changing the patient, display the data of a patient. This softkey appears only if you have not programmed the keyboard as the default input unit.
---	---

	This softkey corresponds to  . After exposure the patient fields can be set free to correct data or to fill out missing patient data. In the “Configuration/main options” menu you can activate/deactivate this function. If deactivated, the softkey is not visible.
---	--

Legend

OPTIMUS - PDO	
<u>F</u> ile <u>C</u> onfiguration <u>I</u> nf <u>o</u>	
PATIENT NEW VIEW EDIT Room ☒ Room 1 ☐ Room 2 ☐ Room 3 Name First name Date of birth Sex Patient ID RIS ID Examination Ref. doctor Diagnosis Remark	EXAMINATION Series ↓ Exposure(s) APR Name APR No. Film Format Auxiliary SID kV mAs Fluoro time Area Dose OUTPUT ☐ Printer 1 ☐ Printer 2 ☐ File  PHILIPS
OPTIMUS	NUM

What do the entry fields and softkeys mean?

Philips suggests the following terms but you can change them according to your requirements.

☐ **Room 1** Examination room 1

☐ **Room 2** Examination room 2

☐ **Room 3** Examination room 3

Name Patient's surname

First name Patient's first name

Date of birth Patient's date of birth

Sex Patient's sex; possible entries M, F

Patient ID Patient-specific number

RIS ID The patient number assigned by the RIS

Examination Examination

Ref. doctor Referring doctor, referring institution

Diagnosis Diagnosis

Remark Field for any remarks

Legend

OPTIMUS - PDO	
<u>F</u> ile <u>C</u> onfiguration <u>I</u> nf	
PATIENT NEW VIEW EDIT Room ☒ Room 1 ☐ Room 2 ☐ Room 3 Name First name Date of birth Sex Patient ID RIS ID Examination Ref. doctor Diagnosis Remark	EXAMINATION Series Exposure(s) APR Name APR No. Auxiliary kV Film Format SID mAs Fluoro time Area Dose
OUTPUT ☐ Printer 1 ☐ Printer 2 ☐ File	
 PHILIPS	
OPTIMUS	NUM

What do the entry fields and softkeys mean?

„EXAMINATION“ and „OUTPUT“ panels

Philips suggests the following terms but you can change them according to your requirements.

Series	Number of examination series
	Select number of examination series
Exposure(s)	Number of exposures in the series
APR name	Name of APR programme
APR no.	Number of APR programme
Film Format	Film size in cm x cm
Auxiliary	Auxiliary selected
SID	Source image distance in cm
kV	Exposure voltage
mAs	mAs product
Fluor. time	Fluoroscopy time
Area dose	Area dose in cGycm ²
☐ Printer 1	Output to printer 1
☐ Printer 2	Output to printer 2
☐ File	Save data to output file

Operation

Activating an output unit

- Place a cross with the mouse
☐ Printer 1 ☐ Printer 2 ☐ File
- or
- select a field with  and place a cross with the **spacebar**.

Setting exposure parameters

- Set the exposure parameters at the generator control desk.
For further information refer to the manual for the generator.

Positioning the patient

- Position the patient according to the type of examination.

Selecting the examination room

- with , ,  or
- select with the mouse
☐ Room 1 ☐ Room 2 ☐ Room 3
- or
- select a room with  and place a cross with
   .

Entering the data of a new patient

Please observe also for the first patient:
Before entering patient data click or .

You can enter the data of a new patient by

- transferring the data from **RIS**
- transferring the data from a **chipcard** or **magnetic card**
- reading them in via a **bar code reader** or
- entering them via **keyboard**.

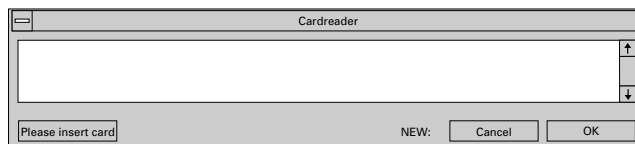
Entering data via the keyboard:

- ; the cursor is in the first field
- Fill in the field; you can make corrections with 
- To place the cursor in the
– next field: 
– previous field: hold down  + press 
- Fill in the field.

Transfer data from a chip card:

- Insert the chip card in the reader
- Open the data mask with
–  or – if the card reader has been configured as the default input unit - with
–

The following appears



The data are read in.

- or 

If you wish to abort transfer of the data:

- or 

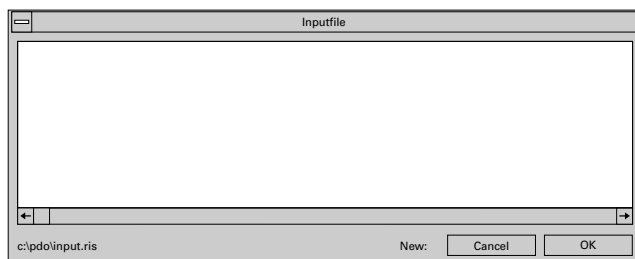
If you wish to read the data in again:

-

Transferring data from the input file:

-  or

The following appears.



- To select data:     or click with the mouse.
The data selected are highlighted.
- To acknowledge the entry: ,  or double-click this line.

If you wish to abort selection:

- or .

Changing the data of a patient

Normally you can enter a patient's data **only before the first exposure** and edit them via the keyboard. For special cases (e.g. Casualties) you can change the patient data later:

-  or 
-  ; the cursor is in the first field
- Change data; you can make corrections with 
- To place the cursor in the
 - next field: 
 - previous field: hold down  and press 
- Change data.

Releasing an exposure

With the handswitch release the exposure. The exposure parameters appear on the monitor when the appropriate examination room has been selected.

Compatibility

The OPTIMUS-PDO has been tested with the following equipment:

OPTIMUS 50/65/80 as of version 2.1

DIAMENTOR M4

Philips chipcard reader

- PE 115

Magnetic card reader

- CHERRY E 80-1501 HAD, integrated into the keyboard
- any equivalent card reader

Bar code reader

Welch Allyn SCANTEAM 3000 CCD

PC with the following requirements:

- from operating system Windows 3.1/3.1.1/95/98/NT 4.0/W2000/Windows XP
- at least a 486 processor
- at least 8 Mbyte RAM
- VGA graphics card
- 3 Mbyte of free hard disk space are necessary for installation.

If you want to use your PC together with a powersaver, a HD saver or the like you have to check this configuration. Philips cannot give general recommendations because of many possible PC systems. In case of doubt **do not use** any powersaver.

Appendix

If you wish to adapt the program to your system

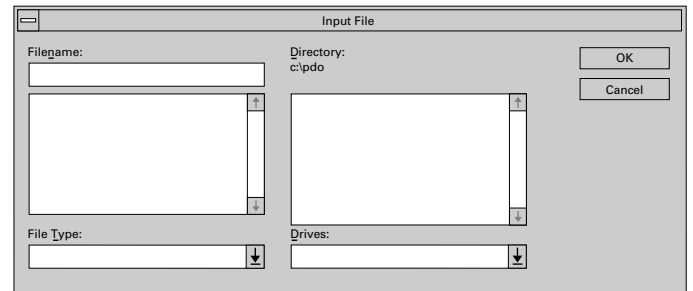
This is possible with the aid of the following sub-menus which you will find under the „File“ menu:

Input file

Select the disk drive, name and directory of the input file delivered by the RIS.

Accept filename

Abort

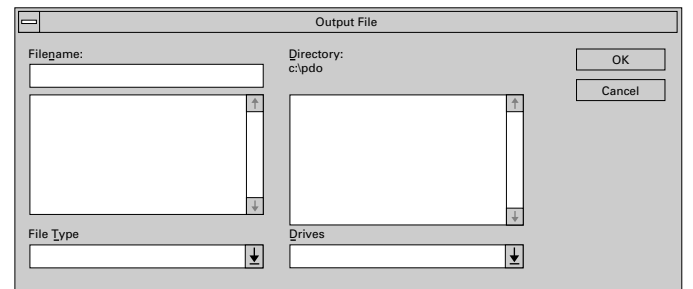
A dialog box titled "Input File" with a standard Windows-style title bar. It contains four main input areas: "Filename:" with a text box and a list box below it; "Directory:" with a text box and a list box below it; "File Type:" with a dropdown menu; and "Drives:" with a dropdown menu. On the right side, there are "OK" and "Cancel" buttons.

Output file

Select disk drive, name and directory of the output file.

Accept filename

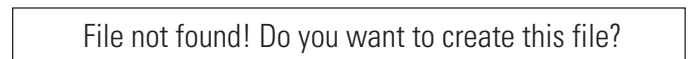
Abort

A dialog box titled "Output File" with a standard Windows-style title bar. It contains four main input areas: "Filename:" with a text box and a list box below it; "Directory:" with a text box and a list box below it; "File Type:" with a dropdown menu; and "Drives:" with a dropdown menu. On the right side, there are "OK" and "Cancel" buttons.

If no output file exists yet, the following appears

Create file

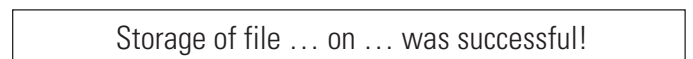
Abort

A simple rectangular dialog box with a single line of text: "File not found! Do you want to create this file?"

Emptying the output file

With this function you can delete the contents of the output file. The program saves the current output file and creates a new empty one as soon as new data have to be stored. The following appears

Delete message.

A simple rectangular dialog box with a single line of text: "Storage of file ... on ... was successful!"

Printer 1/2

Please observe the following:
Select only the printer. From this interactive window the program only permanently remembers the printer. All the other settings are temporary. You must set them up permanently via the WINDOWS system control/printer. Depending on the speed of the printer and the quality of the printer driver the print operation may slow down the system considerably and in exceptional cases may disturb data transfer from the OPTIMUS or DIAMENTOR. For this reason configure „Printer priority“ in the Windows print manager via the menu „Options/Print in background“ to „Low“.

– Font

For the first (second) printer select the font, style and size of type.

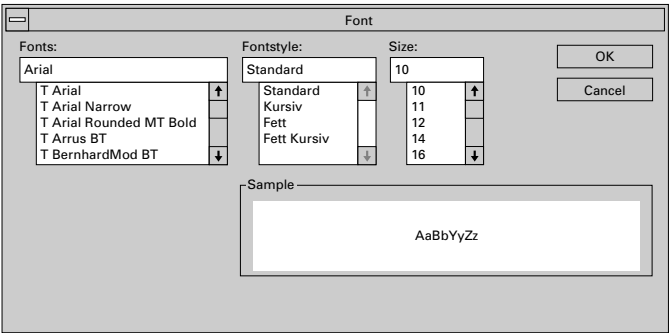
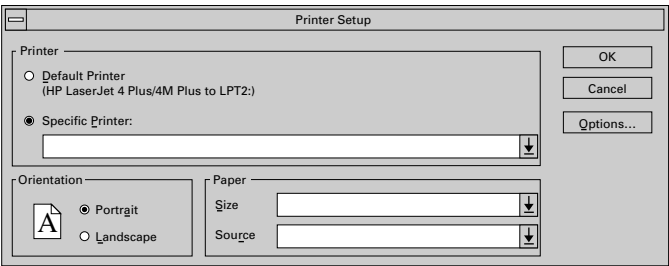
- OK

Acknowledge selection
- Cancel

Do not acknowledge selection.

To terminate

Terminate program.



If you wish to configure the program according to your requirements

This is possible with the sub-menus which you will find in the „Configuration“ menu. With each sub-menu you open a window. Since all these windows have an identical layout, here is an explanation using the **example** opposite:

1 Selection window

On the left you will find the names of the fields which you can edit and on the right the respective entry.

2 Interactive line

This is where your selection appears. You can change the content of the input window.

Acknowledge changes

Abort

If you wish to change the entry:

- Select entry with or with the mouse. The entry selected is highlighted.
- Change entry
- If necessary, select the next entry and change it etc.
- To acknowledge change:
- To abort: or .

You can switch between the selection window and the interactive line by pressing .

FIELD NAME	FIELD POSITION
Delimiter	TAB
Surname	1
First name	2
Date of birth	3
Sex	4
Patient No.	5
Examination No.	6
Ref. doctor	7
Att. doctor	8
Comment 1	9
Comment 2	10

2 Date of birth 3

Main options

You can define the basic settings of the program. If you have changed the basic settings you must then leave the program and start it again.

You can change the following parameters:

- Number of rooms used
PDO can administer 3 examination rooms. Rooms not being used appear in grey and no entries can be made.
- Number of patient fields
You can use up to 10 patient fields. Fields not being used appear in grey and no entries can be made.
- Edit patient fields
Here you can specify whether should be activated and remain visible or not.
- OPTIMUS
Select the interface (COM1...COM4) to which the generator control desk is connected. If no control desk is connected: "NONE".
- DIAMENTOR M4
Select the interface (COM1...COM4) to which the DIAMENTOR is connected. If no DIAMENTOR is connected: "NONE".
- DIAMENTOR room
Select the room in which the DIAMENTOR is connected.
- DIAMENTOR channel
Select which channel of the DIAMENTOR is to be read out for the value of area dose: A, B or A+B. With A+B the values of both channels are added.
- Card reader
Select the interface (COM1...COM4) to which the chipcard reader is connected. If none is connected or if it is looped into the keyboard interface: "NONE/Keyboard".
- Standard input
Here you find the default input unit which you call up with or .
You have the choice between
 - "Input file" if you wish to accept the patient data from the input file
 - "Card reader" if you wish to input the patient data via chipcard or magnetic card reader
 - "Keyboard" if you wish to enter the patient data via the keyboard or via the bar code reader.With "Input file" and "Card reader" also appears in the data mask.

- Output file name
This is normally defined in the "File/output file" menu. With the settings "AUTO" (monthly)" or "AUTO (daily)" the file name changes automatically. This makes it easier for you to perform statistical analysis.
- Program mode
Normally this function is deactivated (NORMAL MODE). For information on how to test the program, refer to the section entitled "If you wish to test your system".

Field names

You can define the names of the input/output fields in the data mask and in the output. Please bear in mind that the length of names visible on the screen can be up to 14 characters.

Input file fields

If you enter the patient data via an input file, you can define how the various fields are to be extracted from the data record and transferred to the patient data fields. Any input or output fields which you do not use are automatically dimmed.

There are **two possibilities**:

- The fields of the data record are separated by control characters.
 - select a separator for your input data record, e.g. TAB.
 - for each subsequent patient data field enter a number to specify which field position in the data record is to appear in that particular patient data field. In the data mask the content of the third field of the input data record is assigned to the patient data field "Born".
- The fields in the input file must have a fixed position
 - Select "NO SEPERATOR"
 - Determine from which position to which position individual characters of the input data record are to be transferred to the patient data field. For each subsequent patient data field enter two numbers separated by a comma. In the following example the character positions 17 to 26 from the data record are assigned to the patient field "Born":

Born	3
------	---

Born	17,26
------	-------

Card reader fields

If you enter the patient data via a chip card reader (refer to „Standard input“), you can define how the various fields should be extracted from the data record and transferred to the patient data fields. Proceed as described in „Input file fields“.

Output file fields

You can define the structure of the data record of the output file. There are constant texts („Text constants“) and all the patient and exposure data available.

There are **two possibilities**:

- The fields in the data record must be separated by control characters
 - Select a separator for your output data record, e.g. TAB.
 - For each subsequent output data field enter a number which determines which field position of the data record is to appear in this output data field. In the data mask the content of the 3rd field of the input data record is assigned to the patient data field „Born“.

In the following example the content of the „Born“ field is written into the 5th field position of the output data record without any leading or trailing blanks:

Born	5
------	---

- The fields in the output file must have a fixed position
 - Select „NO SEPARATOR“
 - Determine from which position to which position individual characters of the data set are to be transferred to the output data field. For each subsequent patient data field enter two numbers separated by a comma.

In the following example the character positions 17 to 26 from the data record are assigned to the patient field „Born“:

Born	17,26
------	-------

Characters in the data set which are not described appear as blanks. The length of the data record is defined by the highest character position in the data record description.

Text constants

You can insert constant texts (up to 20 lines) in the data record. The maximum width of the text can be as long as the printed page.

- Select text line
- Enter text
- 

Under „Output file fields“ and „Edit layout“ you can position your texts.

Print layout

There are 6 different layouts available under the “Edit layout” menu. If necessary you can change these layouts.

Editing the layout

You can define 6 layouts for output on the printer. After selecting 1...6 the window appears „Edit layout (1...6)“. Here you define where on the printout the patient, examination data fields and constant texts are to appear.

- Layout name
 - Give the current layout and name. This appears together with the online printer in the data mask in the area „OUTPUT“.
- Horizontal and vertical layout units
 - Here you can find the units of measurement for the layout:
 - Pica (1/10 inch) Width of a character in 12-point Pica type (1 character)
 - lines (1/6 inch) Height of a line in 12-point Pica type (1 line)
 - pt (1/72 inch) Entries in points
 - inch Entries in inches
 - cm Entries in centimetres.

You must enter **decimals** using a **decimal point**.

Philips recommends:

For printer output use a typewriter font such as Courier. All the characters have the same width so you can position the output fields in the units „Lines“ and „Pica“.

- Left margin
Width of the left margin.
- Upper margin
Width of the upper margin.
- Format width
You need this figure if you wish to repeat a layout format on a page. Enter the width of a layout format in the units as described under „Horizontal units“. You determine how often you wish to repeat a format on a page via „Formats adjacent“ and „Formats vertical“.
- Format length
You need this entry if you wish to repeat a layout format on a page. Enter the (vertical) length of a layout format in the units as described under „Vertical units“. You determine how often you wish to repeat a format on a page via „Formats adjacent“ and „Formats vertical“.
- Horizontal formats
You need this entry if you wish to repeat a layout format on a page. Enter how many times the adjacent layout formats are to appear on the printed page.
- Format vertical
You need this entry if you wish to repeat a layout format on a page. Enter how many times the vertical layout formats are to appear on the printed page.
- Number of copies
You need this entry if you wish to have a number of copies of an exposure. Enter the appropriate figure.

Layout control commands

After the format entries for the layout the output file fields (plain text and all patient and examination data fields) appear along with positioning parameters and other control commands. You can assign the following layout control commands to these output file fields:

- xy This position describes the top left-hand corner of the output field in the layout.

Example: 12 27
The top left-hand corner of the output file field is 12 units offset to the right and 27 units down in relation to the top left-hand corner of the layout (defined under „Top edge“ and „Left margin“).
- V With the following positioning commands the content (value) of a field is output (default setting).
- N With the following positioning commands the name of a field is output.
- + The counting index for the exposures of the examination is raised by 1. Also the „V“ command is executed.
- Cn Count: The following commands are executed n times and at the same time the count index for the exposures of the examination is raised by 1. If there is no other entry (increment), there is a line feed after each run (C40 is used, e.g. for list output per patient).
- lxy Increment: After a run through the count the format increment is specified in horizontal (x) and vertical (y) units. The default setting is l01 (1 line feed).

For each output file field you can enter several layout control commands, which must be separated by commas.

Examples

Entry:
Area dose 10 17, 30 17, 50 17

The content of the output file field is printed three times, e.g. on three identical labels next to one another.

Display:
1,23cGycm² 1,23cGycm² 1,23cGycm²

Entry:
Area dose N, 30 17, V, 50 17

At position 30 17 the name of the field appears („Area dose“), at position 50 17 the content.

Display:
Area dose 1,23cGycm²

Entry:
Area dose N, 10 17, V, 25 17, +, 40 17, +, 55 17

- At position 10 17 the name of the field appears („Area dose“),
- At position 25 17 the value for the 1st exposure appears,
- At position 40 17 the value for the 2nd exposure appears,
- At position 50 17 the value for the 3rd exposure appears.

Display:
Area dose 1,23cGycm² 2,68cGycm² 1,77cGycm²

Printer 1(2) options

Here you assign a layout to the printer and define when it should print.

- Printer 1(2) uses layout #
Enter the number of the layout which the printer should print.
- Printer output 1(2) for
„Exposure“: The data are printed out after each exposure.
„Patient“: The data are printed out after the patient change.

Output file options

If you have selected an output file under „Output file“ you can define the time of output here:

„Exposure“: Output after each exposure
„Patient“ Output after patient change.

Appendix

If you wish to test your system

Before the test ensure that when starting the program, all the equipment is connected and switched on.

Testing the program

After customisation you can also test the program without any real data from the generator, e.g.

- Layout
- Output times
- Assignment of the fields of the input file and the chip card reader
- Assignment of the fields of the output file.

For the test the program always uses the file name „pdo_test.txt“ for the output file in order to avoid confusion with real examination data.

Proceed as follows:

- Main options
- Program mode
- TEST MODE
- Leave program
- Start program; the following appears

Do you want to start the program in TESTMODE ?

- Select
In the data mask "Examination" now appears as .
If the file "optimus.mes" is in the PDO directory, you can press or to artificially create generator data in order to test the program.

After the test:

- Main options
- Program mode
- NORMALMODE
- Leave the program and restart it.

Testing the chip card reader

Check the read process in the TEST MODE.

Testing the bar code reader

During installation the unit is configured and coded according to the manufacturer's specifications. Check the read process in the TEST MODE.

Testing the printer

Check printer output in the TEST MODE.

Testing the link between OPTIMUS and DIAMENTOR

- NORMAL MODE

-

The **status line** shows

OPTIMUS: ... Reset OK

DIAMENTOR: ... Reset OK

If the link to OPTIMUS is defective, no message will appear.

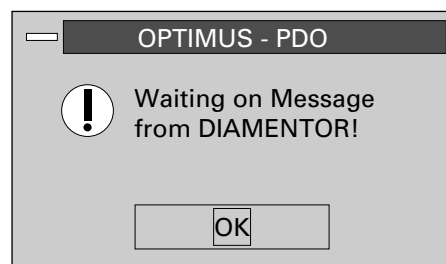
- Remedy the defect and conduct a test again.

If the link to DIAMENTOR is defective, the status line will show

OPTIMUS: ... Reset OK

-

The following appears



- Remedy the defect and repeat the test.

Testing the general working condition

- No error message may appear if you switch on the components of the system (generator, Diamentor, PC, PDO, printer) in any sequence. For information about error messages refer to p. 24.

How to install the unit

The Philips-Service has to release the PDO function at the generator.

Connections

Before you put the PDO into operation, you must connect it up. Proceed as follows:

- Switch generator off
- Switch PC off
- Plug the serial interface cable* with the 9-pin connector "C 300 X2" into the generator control desk at the PC and screw in place.
- Plug the green-yellow protective earth lead** into the generator control desk and the PC.
- Connect all the other interfaces on the PC according to the system configuration and as required.

* You can extend the special serial connecting cable with a standard cable (connect all 9 pins 1:1, screened). The protective lead must be replaced by a longer equivalent lead.

** On the PC a suitable screw terminal must be used on the metal housing (preferably near the mains connection), whereby any enamel must be removed first.

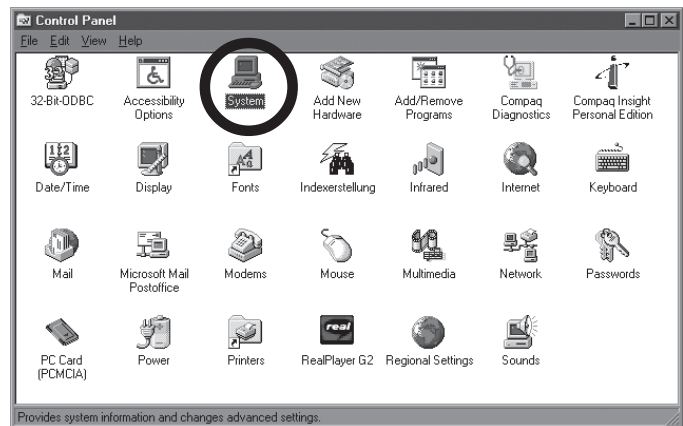
Serial interfaces

The generator, DIAMENTOR and card reader are connected up to serial interfaces. Configure them via the „Windows system control/ports“. Select „HARDWARE“ for the protocol. This must be programmed in Windows setup. Depending on your computer system use one of the picture series shown on the next pages. The transfer parameters (baud rate etc.) are set by the PDO. Ensure that the settings for IRQ and base address are correct.

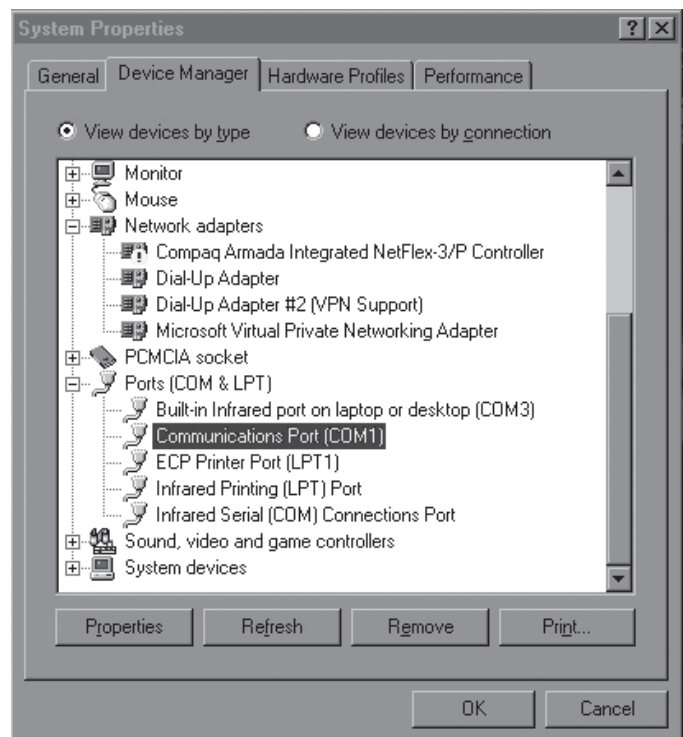
Appendix

Windows 95/98

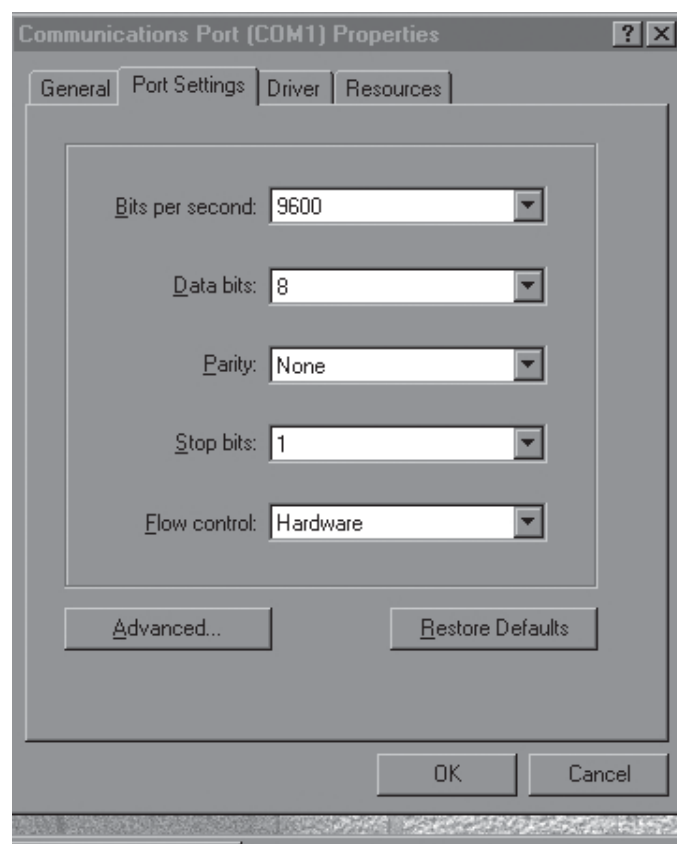
- Click onto “Start”
- Select “Settings”
- Select “Control Panel”
- Select “System”



- Select TAB “Device Manager”
- Select “Communications Port (COM1)”
- Click onto “Properties”



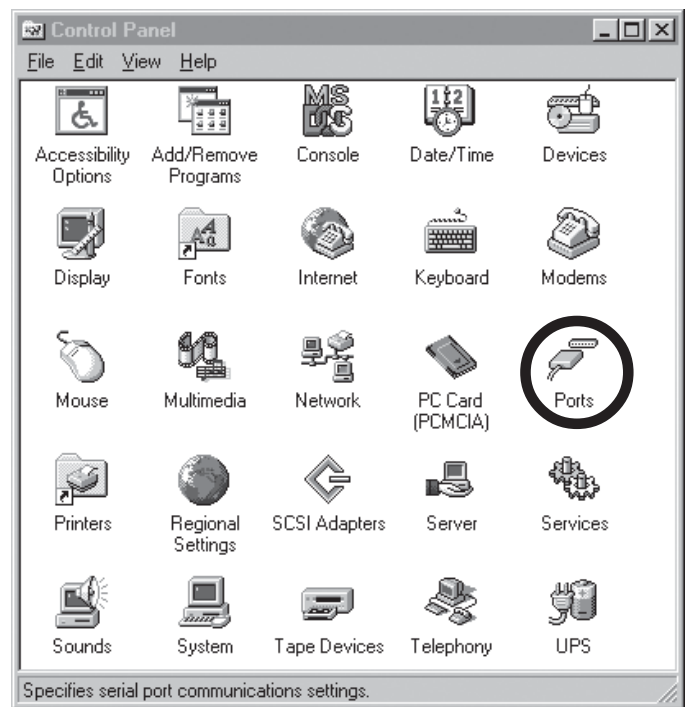
- Select TAB "Port Settings"
- Select "Hardware" in the window "Flow control"
- Confirm with "OK"



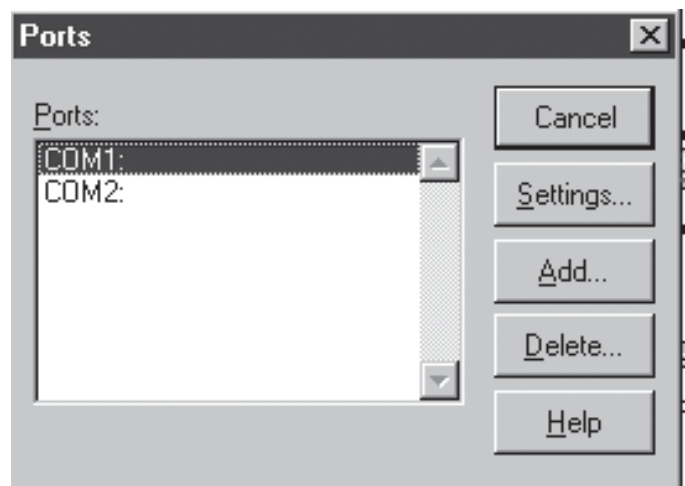
Appendix

Windows NT

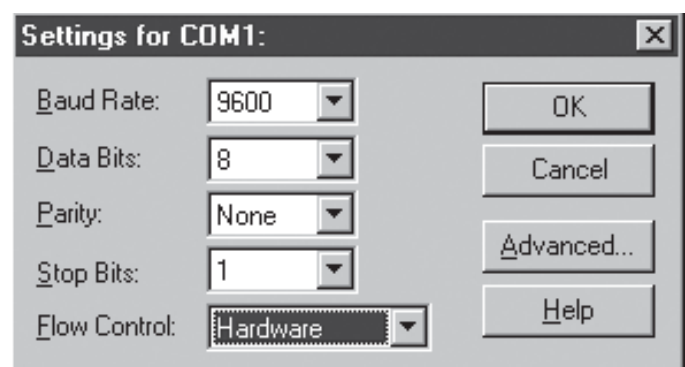
- Click onto “Start”
- Select “Settings”
- Select “Control Panel”
- Select “Ports”



- Select “COM1”
- Click onto “Settings”

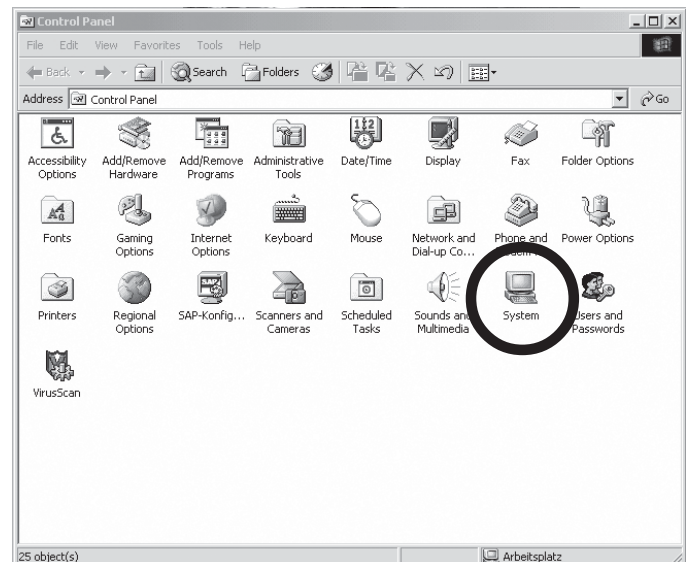


- Select “Hardware” in the window “Flow Control”
- Confirm with “OK”

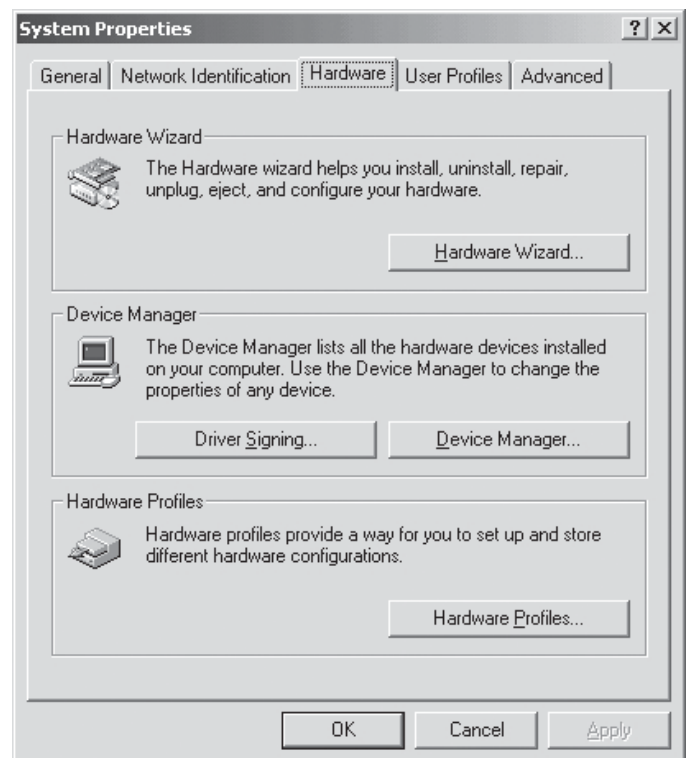


Windows 2000

- Click onto “Start”
- Select “Settings”
- Select “Control Panel”
- Select “System”

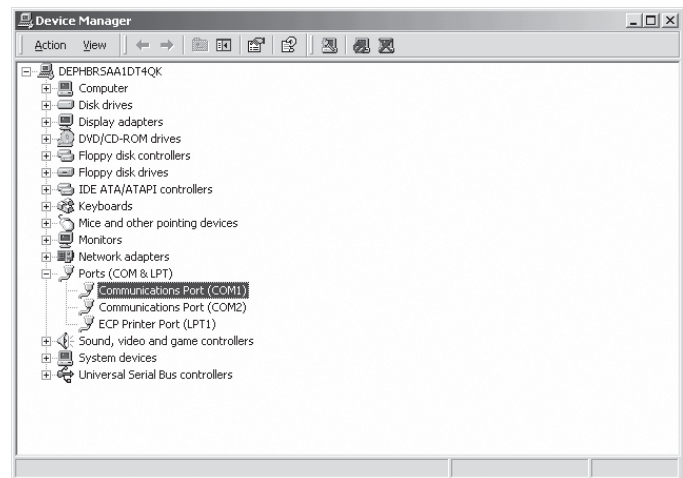


- Select TAB “Hardware”
- Click onto “Device Manager”

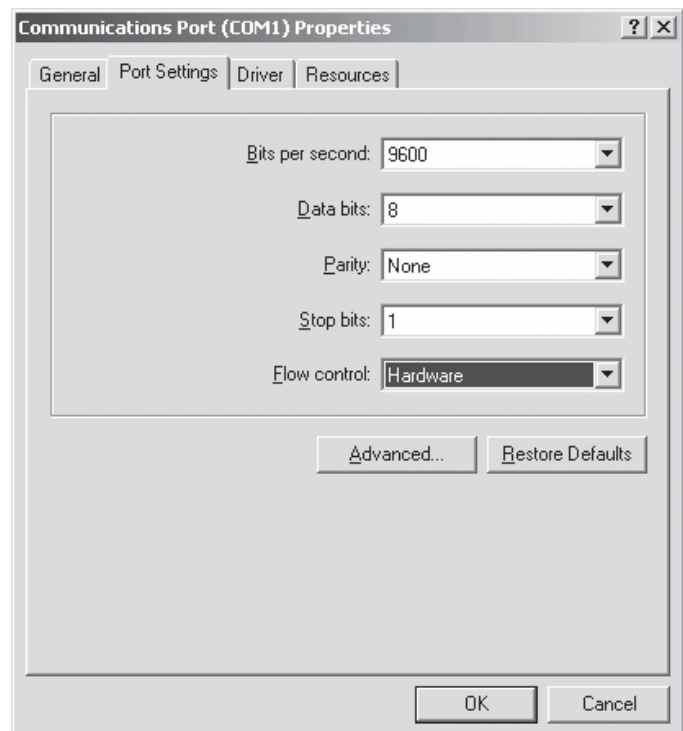


Appendix

- Select “Communications Port (COM1)”

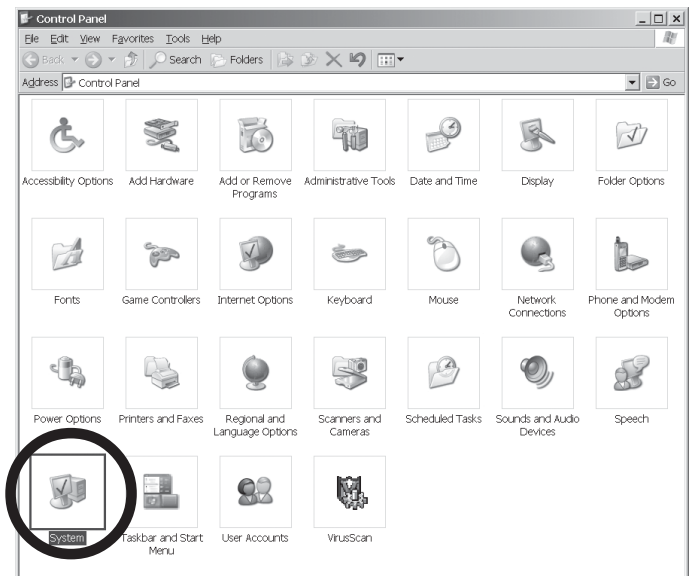


- Select TAB “Port Settings”
- Select “Hardware” in the window “Flow control”
- Confirm with “OK”

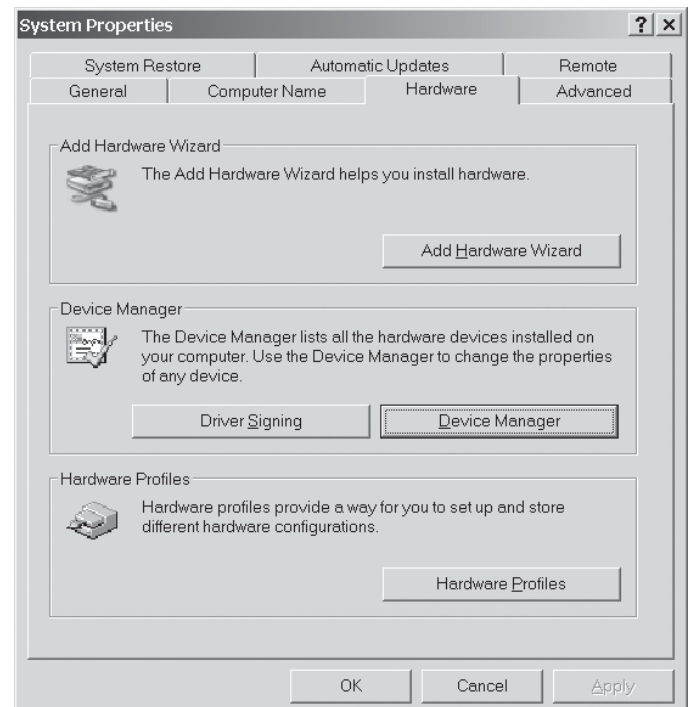


Windows XP

- Click onto “Start”
- Select “Settings”
- Select “Control Panel”
- Select “System”

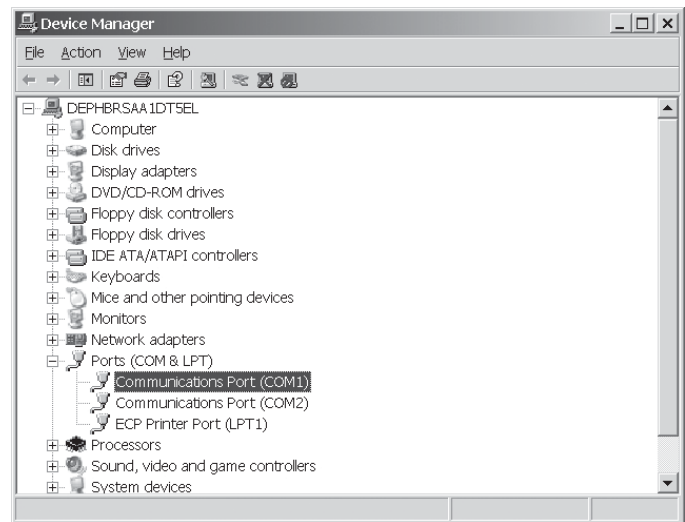


- Select TAB “Hardware”
- Click onto “Device Manager”

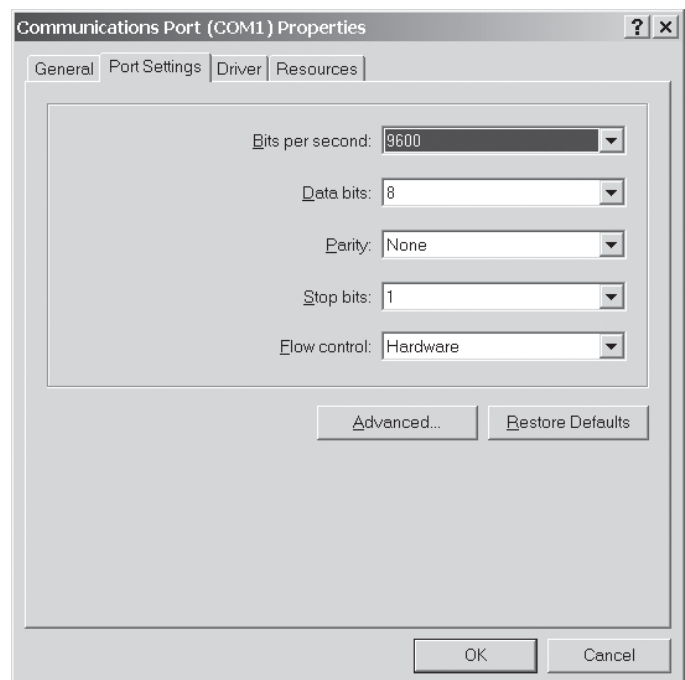


Appendix

- Select “Communications Port (COM1)”



- Select TAB “Port Settings”
- Select “Hardware” in the window “Flow control”
- Confirm with “OK”



If you wish to install your PDO yourself, there are two sample configurations below.

Sample configuration (default units)

Serial interfaces:

COM1, IRQ4: Mouse

COM2, IRQ3: OPTIMUS generator

Printer interface:

LPT1, IRQ7: Label or list printer

Sample configuration for connecting all units

To save system resources, you can configure printer interfaces in Windows without an interrupt (IRQ). If this is not possible you link the additional interfaces to free interrupts. For more details refer to the documentation on your interface card.

Serial interfaces:

COM1, IRQ4: Mouse

COM2, IRQ3: OPTIMUS generator

COM3, IRQ5: DIAMENTOR M4

COM4, IRQ7: Card reader

Printer interfaces:

LPT1, without IRQ: Label printer

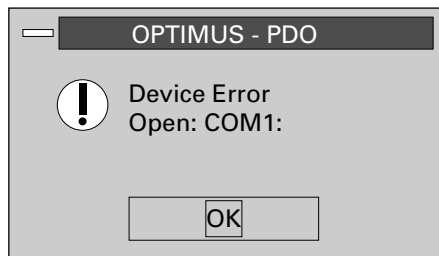
LPT2, without IRQ: List printer

Equipment which can be looped into the keyboard interface (e.g. bar code reader, magnetic card reader), you require no additional port. The data are accepted by the program as an entry via the keyboard.

And if something doesn't work ...

... an error message appears on the screen. It might look like this (examples):

After program start



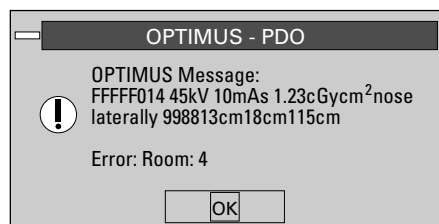
Meanings and causes

It was not possible to open the serial interface „COM1“. Assignment of the serial interface in the menu „Configuration/options“ is defective.

What you can do

Correct the settings and start the program again.

While the program is running



The program has received a defective message from the generator or cannot assign the message.

The error message comprises three parts:

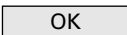
1. The source of the defective message, in this case OPTIMUS message.
2. The content of the message.
3. The type of error, in this case a wrong room number.

The program checks the message received from OPTIMUS and DIAMENTOR for

- identification (transmission error)
- sequence of arrival (sequence error)
- check sum (check sum error)
- room number (room error).

Several causes are possible:

- The units are not switched on.
- The cable connections are faulty.
- The serial interface is not configured correctly.
- The computer is overloaded.

- Press 



Be aware that the PDO does not receive defective equipment data.

- Leave the program
- Test system.

For quick reference ...

Bar code reader	4f, 12, 22
Basic settings	18
Card reader field	19
Check boxes	5f
Chip card	4f, 12
Chip card reader	14, 18f, 22
Configuration	7, 17ff
Control characters	18f
Cursor	5, 12
Data mask	6, 19
Default input	18
Default input unit	5, 7, 12, 18
DIAMENTOR	4, 7, 14, 18, 22
DIAMENTOR channel	18
DIAMENTOR room	18
Edit layout	19
Error message	27
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Examination room	5ff, 12, 18
Exposure data	6
Exposure parameters	12
Field name	18
File	7, 15
File manager	4
Font	16
Format length	20
Format width	20
Function keys	5
Input	5
Input data record	18f
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Input file	5, 12, 15, 18
Input file field	18
Interactive line	17
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Layout control commands	20
Layout name	19
Layout units	19
Left margin	20
Main options	18
Mouse	7
Normal mode	18

Abbreviations

Output file	15, 21
Output file field	19f
Output unit	6, 12
Patient change	21
Patient data	4ff, 12, 19
Patient data field	18f
Patient field	18
Positioning command	20
Printer	11, 16, 21f
Program mode	18
Pull-down menus	5ff
RIS	4, 12, 15
Selection window	17
Separator	18f
Softkey	7ff
Space bar	5, 12
Status line	6f
Test	24
Test mode	12
Text	5
Text constant	19
Top margin	20
Window	7, 17

APR	Automatic Exposure Control (Anatomically Programmed Radiography)
SID	Source-Image Distance
RIS	Radiology Information System

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